

IN THE CLAIMS

Please amend the following claims.

- 1-12. (Canceled)
13. (Amended) A method of forming a gate dielectric layer, comprising:
 - forming an oxide layer on a surface of a substrate;
 - forming a metal layer over the oxide layer; ~~and~~
 - reacting at least a first portion of the metal layer with the oxide layer to form a metal oxide dielectric; and
 - forming a gate electrode over said metal oxide dielectric.
14. (Original) The method of Claim 13, further comprising reacting a second portion of the metal layer with an oxidizing ambient.
15. (Original) The method of Claim 13, wherein reacting at least a first portion of the metal layer with the oxide layer comprises heating to a temperature greater than approximately 600°C.

16-26. (Canceled)

27. (New) The method of claim 13, further comprising forming a source region and a drain region in said semiconductor substrate on opposite sides of said gate electrode.

28. (New) The method of claim 13, wherein said oxide layer is a silicon dioxide layer formed to a thickness between 5-100Å.

29. (New) The method of claim 13, wherein said metal layer is formed to a thickness between 100-200Å.

30. (New) The method of claim 13, wherein said metal layer is a metal that does not react with silicon to form a silicide.

31. (New) The method of claim 30, wherein said metal layer is selected from the group consisting of hafnium and zirconium.

32. (New) The method of claim 13, wherein said forming said metal layer and said reacting said metal layer with said oxide layer occurs in the same chamber.

33. (New) A method of forming a gate dielectric layer comprising:

thermally growing an oxide layer on a surface of a silicon film;

forming a metal layer over said oxide layer, wherein said metal layer is formed from a metal which does not react with silicon to form a silicide;

reacting at least a first portion of said metal layer with said silicon oxide layer to form a metal oxide dielectric; and

forming a gate electrode onto said metal oxide dielectric.

34. (New) The method of claim 33, wherein said forming said metal layer and said reacting said first portion of the metal with said oxide occurs in the same chamber.

35. (New) The method of claim 33, wherein said silicon oxide layer is thermally grown to a thickness between 5-100Å.

36. (New) A method of forming a dielectric layer comprising:

forming an oxide layer on a surface of a silicon film;

forming a metal layer over said oxide layer in a chamber under vacuum; and

reacting at least a first portion of the metal layer with said oxide layer to form a metal oxide dielectric in said chamber without breaking said vacuum.

37. (New) The method of claim 36, further comprising forming an electrode over said metal oxide dielectric.

38. (New) The method of claim 37, wherein said electrode is a gate electrode.

39. (New) The method of claim 38, further comprising forming a source region and drain region in said silicon film on opposite sides of said gate electrode.